

REMARKS

Claim 1-19 are pending in the application. Claim 1 has been withdrawn and claims 2, 10, 11 and 19 have been amended by way of the present amendment.

In the outstanding Office Action, the Restriction Requirement was made final; claims 1-4 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; claims 2-9 and 11-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over by U.S. Patent No. 6,215,135 (Schroder) in view of U.S. Patent No. 5,589,423 (White et al.); and claims 10 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schroder in view of White et al. and further in view of Applicant's Admitted Prior Art (AAPA).

Rejections under 35 U.S.C. Section 112

Claims 1-4 were rejected under 35 U.S.C. 112, second paragraph. In addition, claim 11 was referenced in the rejection. In response to the rejection, claims 2 and 11 have been amended to clarify the invention. In particular, claims 2 and 11 have been amended to recite:

wherein said gate is positioned between a p-diffusion of said source and a p-diffusion of said drain,
an n-diffusion is connected to said gate and said p-diffusion of said source and is spaced apart from said p-diffusion of said source,
said transistor is coupled to an I/O pad that is connected to said p-diffusion of said drain, and
the I/O pad has no connection to n-diffusions of said transistor.

Support for the amendment is provided at least at page 11, lines 1-16; and shown in FIG. 7 of the specification. Therefore, it is respectfully submitted that the amendments raise no question of new matter and that the claims are definite.

Rejections under 35 U.S.C. Section 103

Claims 2-9 and 11-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schroder in view of White et al. In response to the rejection, claims 2 and 11 have been amended to clarify the invention. In particular, claims 2 and 11 have been amended to recite:

wherein said gate is positioned between a p-diffusion of said source and a p-diffusion of said drain,
an n-diffusion is connected to said gate and said p-diffusion of said source and is spaced apart from said p-diffusion of said source,
said transistor is coupled to an I/O pad that is connected to said p-diffusion of said drain, and
the I/O pad has no connection to n-diffusions of said transistor (emphasis added).

Support for the amendments is provided at least at page 11, lines 1-16; and shown in FIG. 7 of the specification. Therefore, it is respectfully submitted that the amendments raise no question of new matter.

Schroder discloses an integrated circuit provided with electrostatic discharge (ESD) protection means.¹ In particular, Schroder discloses a Metal Oxide Semiconductor (MOS) transistor device MP with a p-type substrate SUBSTR and an n-type well WLL.² Further, Schroder discloses the MOS transistor device MP includes a gate g2, located between p+ areas d4, d5 that jointly form the MOS transistor device MP; an n+ area d6 that is located adjacent to p+ area d5 and is connected to a second reference terminal VDD; and a bonding pad BP connected to the p+ area d4.³ More specifically Schroder discloses a protection means where there will be no current flowing through the substrate SUBSTR since the n-type well WLL is connected via the n+ area d6 to a reference terminal VDD.⁴

However, Shroder nowhere discloses, as claims 2 and 11 recite:

an n-diffusion is connected to said gate and said p-diffusion of said source and is spaced apart from said p-diffusion of said source (emphasis added).

That is, in contrast to an "n-diffusion" that is "spaced apart from said p-diffusion," as recited in the claimed invention, Shroder discloses an n+ area d6 that is located immediately adjacent to p+ area d5. Thus, it is respectfully submitted that Shroder does not disclose the invention of claims 2 and 11.

¹ Schroder at ABSTRACT.

² *Id.* at FIG. 1.

³ *Id.* at column 2, lines 40-55.

⁴ *Id.* at column 3, lines 5-10.

In addition, the outstanding Office Action acknowledges deficiencies in Shroder and attempts to overcome these deficiencies with White et al.⁵ However, White et al. cannot overcome the deficiencies of Shroder as discussed below.

White et al. discloses a process for fabricating a non-silicided region in an integrated circuit.⁶ However, White et al. nowhere discloses, as claims 2 and 11 recite:

an n-diffusion is connected to said gate and said p-diffusion of said source and is spaced apart from said p-diffusion of said source (emphasis added).

That is, White et al. cannot overcome the deficiencies of Shroder.

Thus, it is respectfully submitted that neither Shroder nor White et al. disclose, suggest or make obvious the claimed invention, whether taken individually or in combination, and therefore, claim 2 and claim 11, and claims dependent thereon, patentably distinguish thereover.

Claims 10 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schroder in view of White et al. and further in view of AAPA. Applicants respectfully traverse the rejection.

Claims 10 and 19 are ultimately dependent upon claims 2 and 11, respectively. Thus, at least for the reasons discussed above, neither Schroder nor White et al. disclose, suggest or make obvious the invention of claims 10 and 19.

In addition, the outstanding Office Action acknowledges deficiencies in Shroder and White et al. and attempts to overcome these deficiencies with AAPA.⁷ However, AAPA cannot overcome the deficiencies of Shroder and White et al. as discussed below.

The AAPA discloses a circuit configuration of the background art typical of a latch-up condition.⁸ However, it is respectfully submitted that the circuit configuration of the AAPA is not analogous to the recitations in claims 2, 10, 11 and 19. In particular, claims 2 and 11 recite:

an n-diffusion is connected to said gate and said p-

⁵ Outstanding Office Action at page 3, lines 17-19.

⁶ White et al. at ABSTRACT.

⁷ Outstanding Office Action at page 5, lines 15-17.

⁸ Specification at page 3, lines 20-25.

*diffusion of said source... and
said transistor is coupled to an I/O pad that is connected
to said p-diffusion of said drain (emphasis added).*

Moreover, claim 10 recites: a "p-type resistor is located between a p-diffusion of said drain of said transistor and said I/O pad" and claim 19 is similarly worded. That is, in the invention of claim 2 and 11, the I/O pad is connected to a *p-diffusion drain* of the transistor. Thus, in claims 10 and 19, the "p-type resistor" is located between the I/O pad and "a p-diffusion drain" of said transistor."

In contrast to the claimed invention, the AAPA discloses a resistor R located between an **INPUT PAD** and diodes **D1, D2**. That is, the AAPA nowhere discloses resistor R as connected to a "p-diffusion drain," as recited in claims 10 and 19. Thus, it is respectfully submitted that, the AAPA does not disclose the limitations of claims 10 and 19 and cannot overcome the deficiencies of Schroder and White et al.

Therefore, it is respectfully submitted that none of Schroder, White et al. and AAPA, whether taken individually or in combination, disclose, suggest or make obvious the claimed invention and that claims 10 and 19, and claims dependent thereon, patentably distinguish thereover.

Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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